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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,257	06/27/2003	Kee Jin Mo	22987.03	4790

37833 7590 09/26/2007

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EXAMINER	
HOANG, HIEU T	
ART UNIT	**PAPER NUMBER**
2152	

MAIL DATE	DELIVERY MODE
09/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/607,257	MO, KEE JIN	
	Examiner	Art Unit	
	Hieu T. Hoang	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/27/05, 09/30/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to communication filed on 08/08/2007.

2. Claims 2 and 3 have been cancelled.

3. Claims 1 and 4-21 are pending.

Response to Arguments

4. Applicant's arguments have been fully considered but are moot in view of new ground(s) of rejection.

Claim Objections

5. Claim 12 is objected to because of the terms "MIB" and "NMS." Abbreviations should be clearly spelled out in the claim language.

6. Claims 4 and 6 are improper dependent claims. The claims depend on claim 3, which was cancelled. The claims will be interpreted as being dependent on claim 1.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 6-9, and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babu et al. (US 6,122,639, hereafter Babu), and further in view of Applicant Admitted Prior Art (background of the application, and fig. 1-5 as conventional arts, hereafter AAPA).

9. For claim 1, Babu discloses an apparatus for managing network interface information (abstract), comprising:

- a network equipment system having information that can identify a site connected to one or more interfaces of each piece of network equipment (fig. 1 network device system 118, each network device 118 contains basic information about the device including device name, domain name, device type code, etc., col. 7 line 66-col. 8 line 6) and including one or more management information bases that store the interface information (col. 1 line 64-col. 2 line 17, MIBs or management information bases); and
- a network management system for polling the management information bases of each piece of the network equipment within the network equipment system to collect the interface information (fig. 1, fig. 4A, step 406, Network Management Server 102 polls network device for detailed device data DDD information), adopting information that can identify each site as primary information to compare the primary information with already registered information and correcting the interface information for each piece of the network equipment (col. 19 lines 60-67, fig. 4A, step 416, new device data is compared with stored device

data; and in step 420, the stored device data is updated after device class has been mapped to an appropriate MIB set of DDD table in step 414).

Babu further discloses the identification information is a code or identification characters (col. 7 line 66-col. 8 line 6), and each code is granted according to pre-defined rules in order to identify a predetermined site by steps and comprised of multi-step sub-codes (col. 8 lines 43-67, table 1, the first record has 3 sub-codes, containing a SysObjectID, a device type, and a device class, rules are such that each device class can have multiple device type, and each ID is a unique device type identifier)

Babu does not explicitly disclose:

said network equipment system comprises a plurality of site units, the interface information being set in each said site unit forming the network equipment system, each said site unit having an identification code associated therewith such that a predetermined site unit may be identified, whereby each said identification code is defined by user-selectable rules, each said identification code comprising a plurality of multi-step sub-codes;

However, AAPA discloses:

said network equipment system comprises a plurality of site units (fig. 4, e.g., ABC company), the interface information being set in each said site unit forming the network equipment system (fig. 4, equipment name), each said site unit having an identification code associated therewith such that a predetermined site unit may be identified (fig. 4, e.g., ABC company is the site name), whereby each said identification code is defined by user-selectable rules (fig. 4, names such as ABC are user defined),

each said identification code comprising a plurality of multi-step sub-codes (fig. 4, sub-codes are department, node, equipment name...);

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu and AAPA in order to user define names such as ABC company, New Jersey branch office to create a user friendly network management interface.

10. For claim 10, Babu discloses an apparatus for managing network interface information automatically (abstract), comprising:

- polling agents for polling interface information of each piece of network equipment from management information bases of each piece of the network equipment at every predetermined time or in real-time (col. 7 line 66-col. 8 line 6, interface information is device data including device name, domain name, type code..., SNMP query for device data is done in real time in a sequence of steps shown in fig. 4A);
- an automatic management module for confirming changes or adds of the interface information read from the polling agents, correcting or managing the interface information (col. 19 lines 60-67, fig. 4A, step 416, new device data is compared with stored device data; and in step 420, the stored device data is updated after device class has been mapped to an appropriate MIB set of DDD table in step 414); wherein said automatic management module comprises a management target equipment list portion for managing interface changes (col.

10 lines 1-5 and 30-40), a code management portion for enabling information matched with each code to be input and displayed (fig. 4A, query using MIB sets to get managed device database), whereby the code is granted to a device connected to a port of each piece of network equipment at a pre-determined set of times using the management target list (fig. 4B, granting MIB sets based on a MIB set table) and comparing the collected information with the registration information in order to manage the network information automatically (table 5, table 6, comparing collected device interface data and database data on that device, fig. 4A, comparing FDDs);

- a database server for storing registration information for each piece of the network equipment or each interface managed by the automatic management module and providing user interface with the stored information (fig. 1, database 40 for storing managed device data, client can queries the network management server for updated device data).

Babu does not explicitly disclose a site code; and sites associated with devices; However, AAPA discloses a site code and sites associated with devices (fig. 4, ABC company, New Jersey branch, with associated equipment name and port)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu and AAPA in order to user define names such as ABC company, New Jersey branch office to create a user friendly network management interface.

11. For claim 12, Babu discloses a method for managing network interface information (abstract), comprising steps of:

(a) granting codes, indicating sites connected to each interface of each piece of network equipment and generating a management target equipment list (table 1, Router GatewayServer, Router 2502, and Router CPA2504 have codes or SysObjectIDs), storing the codes to a MIB and a NMS (fig. 1, NMS network management server and MIB sets); wherein each said code is granted according to a set of pre-defined rules (table 1, rules of certain codes are used for certain devices)

(b) collecting interface information for each piece of the network equipment through Simple Network Management Protocol to generate a table at every predetermined time or in real-time (col. 7 line 66-col. 8 line 6, interface information is device data including device name, domain name, type code...,SNMP query for device data is done in real time in a sequence of steps shown in fig. 4A);

(c) checking non-defectiveness of the codes for the collected interface information of the table (col. 8 lines 25-33); and

(d) comparing information registered to a network management system with the collected table using the granted codes and correcting changes of the registered information (col. 19 lines 60-67, fig. 4A, step 416, new device data is compared with stored device data; and in step 420, the stored device data is updated after device class has been mapped to an appropriate MIB set of DDD table in step 414).

(e) operating a network management system with changed interface information (fig. 1, NMS, col. 10 lines 35-40, update MIB information reflecting changes in the system).

Babu does not explicitly disclose:

in order to identify a pre-determined site, each said code being comprised of a plurality of multi-step codes;

However, AAPA discloses:

in order to identify a pre-determined site (fig. 4, sites are ABC company), each said code being comprised of a plurality of multi-step codes (fig. 4, sub-codes are department, node, equipment name...);

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu and AAPA in order to user define names such as ABC company, New Jersey branch office to create a user friendly network management interface.

12. For claim 14, Babu discloses a method for managing network interface information, comprising the steps of:

(a) inputting interface information connected or to be connected to an interface of each piece of network equipment (fig. 4A step of querying device for detailed device data);

(b) matching the interface information with interface description (fig. 4A, steps 402 and 404);

(c) registering the inputted information to a network management system (fig. 4A step 412 and 414); and

(d) changing the interface information using codes of the inputted or registered information (col. 19 lines 60-67, fig. 4A, step 416, new device data is compared with

stored device data; and in step 420, the stored device data is updated after device class has been mapped to an appropriate MIB set of DDD table in step 414).

(e) operating a network management system with changed interface information (fig. 1, NMS, col. 10 lines 35-40, update MIB information reflecting changes in the system).

Babu does not explicitly disclose:

said interface information being set according to a set of user-selectable, pre-defined rules;

However, AAPA discloses:

said interface information being set according to a set of user-selectable, pre-defined rules;

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu and AAPA in order to user define names such as ABC company, New Jersey branch office to create a user friendly network management interface.

13. For claim 6, Babu-AAPA further discloses each code corresponds to each interface description of each piece of the network equipment (Babu, table 1, col. 8 lines 47-65, codes for Cisco router, and switches).

14. For claim 7, Babu-AAPA further discloses each code is inputted to an interface description of each piece of the network equipment (Babu, table 1, col. 8 lines 47-65, codes for Cisco router, and switches).

15. For claim 8, Babu-AAPA further discloses the network management system reads a code inputted to an interface description of each piece of the network equipment through Simple Network Management Protocol (Babu, fig. 1, network management server queries network devices through a SNMP line to obtain basic device data, col. 8 lines 1-6) and registers the read code to a list of each piece of automatic management target equipment, when registering the interface of the corresponding network equipment (Babu, fig. 4A steps 406, 410, 412, 414, 420).

16. For claim 9, Babu-AAPA further discloses the network management system reads interface information of each piece of automatic management target equipment (Babu, fig. 4 steps 410, 412), adopts at least one of the codes and host names as primary information, compares the primary information with the already registered information and corrects any change if there is, at every predetermined time or in real-time (Babu, fig. 4A step 416, 420, col. 10, lines 35-40, col. 13 line 30-col. 14 line 10).

17. For claim 11, Babu-AAPA further discloses the automatic management module comprising:

- a management target equipment list portion for managing interface changes (Babu, table 4, col. 13 lines 30-56, col. 14 line 62-col. 15 line 6);

- a site code management portion for enabling information matched with each code to be inputted and displayed (Babu, fig. 4B, a management portion using inputted code to retrieve MIB set information for each device);
- an automatic management engine for collecting information of each piece of the network equipment at every predetermined time or in real-time using the management target list and comparing the collected information with the registration information to manage network interface information automatically (Babu, col. 7 line 66-col. 8 line 6, interface information is device data including device name, domain name, type code...,SNMP query for device data is done in real time in a sequence of steps shown in fig. 4A; col. 19 lines 60-67, fig. 4A, step 416, new device data is compared with stored device data; and in step 420, the stored device data is updated after device class has been mapped to an appropriate MIB set of DDD table in step 414); and
- an interface management display portion for displaying a log of corrected information and intervention by an administrator, if necessary, as a web page (Babu, fig. 1, network information report 124, col. 6 lines 48-52, col. 15 lines 7-19).

18. For claim 13, Babu-AAPA further discloses the automatic management for the network equipment comprising the sub-steps of:

- collecting information from each piece of the automatic management target equipment selected by an administrator to generate the table (Babu, col. 6 lines 9-17 and 53-67, fig. 4A, step 412);
- notifying abnormal codes among the collected information to the administrator, deleting the abnormal codes from the collected table, checking operation statuses of an interface of each piece of the network equipment to decide if the codes are necessary and notifying the checked results to the administrator (Babu, fig. 4E steps 482, 486, and 484, checking whether abnormal codes need to be deleted or same codes need to be updated, col. 15, lines 7-15, generating a HTML report of changes for the administrator);
- comparing the collected table with the registered information and correcting the registered information (Babu, col. 19 lines 60-67, fig. 4A, step 416, new device data is compared with stored device data; and in step 420, the stored device data is updated after device class has been mapped to an appropriate MIB set of DDD table in step 414); and
- deciding if a line is canceled or used and deleting unregistered codes from a site code list (Babu, col. 16 lines 1-4).

19. For claim 15, Babu-AAPA further discloses interface information such as Null or loop-back, of no meaning in automatic management is not used as information for change (Babu, col. 15 lines 52-55).

20. Claims 4, 5, 16-19 are rejected under U.S.C. 103(a) as being unpatentable over Babu-AAPA, as applied to claims 3 and 14 above, in view of Canon (EP 0 948 161 A2)

21. For claim 4, Babu-AAPA discloses the invention substantially as described in claim 1. Babu-AAPA does not explicitly disclose the multi-step sub-codes comprise classifiers in order to classify each code.

However, in the same field of endeavor, Canon discloses the multi-step sub-codes comprise classifiers in order to classify each code ([0062], fig. 4, table 1 on page 10, laser beam printers 1 and 2 are classified by using object identifiers or sub-codes ".1" and ".2")

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu-AAPA and Canon in order to uniquely classify nodes's MIB information by entities such as private companies and organizations (Canon [0067]).

22. For claim 5, Babu-AAPA-Canon discloses the invention substantially as described in claim 4. Babu-AAPA-Canon further discloses each code is classified by using at least one of a group of classifier, a Lightweight Directory Access Protocol and X.500 (Canon, [0062], fig. 4, table 1 on page 10, laser beam printers 1 and 2 are classified by using object identifiers or sub-codes ".1" and ".2").

23. For claim 16, Babu-AAPA discloses the invention substantially as described in claim 14 above. Babu-AAPA does not explicitly disclose each piece of the network equipment has different hostname each other. However, Canon discloses each piece of the network equipment has different hostname each other (table 1, laser beam printer 1 and bubble jet printer 1 have different host names or equipment names).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu-AAPA and Canon in order to uniquely classify nodes's MIB information by entities such as private companies and organizations and objects subordinate to the enterprise extension (Canon [0067], [0117]).

24. For claim 17, Babu-AAPA-Canon discloses the invention substantially as described in claim 16 above. Babu-AAPA-Canon further discloses granted codes may be the same if each piece of the network equipment has different hostname each other (Canon, table 1, laser beam printer 1 and bubble jet printer 1 have different host names or equipment names; however, they both have granted code of ".1").

25. For claim 18, Babu-AAPA discloses the invention substantially as described in claim 14 above. Babu-AAPA does not explicitly discloses that granted codes are different each other if there are any two or more pieces of the network equipment having the same hostname. However, Canon teaches the same (Canon, table 1,

granted codes for laser printers 1 and 2 are ".1" and ".2" with a same equipment name to distinguish between the two).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu-AAPA and Canon in order to uniquely classify nodes's MIB information by entities such as private companies and organizations and objects subordinate to the enterprise extension (Canon [0067], [0117]).

26. For claim 19, Babu-AAPA discloses the invention substantially as described in claim 14 above. Babu-AAPA does not explicitly disclose code information is granted differently each other or predetermined information is added to a code, which is granted to a site, if there are 2 or more lines at a site of the same interface or the same piece of the network equipment.

However, Canon discloses code information is granted differently each other or predetermined information is added to a code, which is granted to a site, if there are 2 or more lines at a site of the same interface or the same piece of the network equipment (Canon, table 1, granted codes for laser printers 1 and 2 are ".1" and ".2" with a same equipment name to distinguish between the two).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Babu-AAPA and Canon in order to uniquely classify nodes's MIB information by entities such as private companies and

organizations and objects subordinate to the enterprise extension (Canon [0067], [0117]).

27. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barroux (US 6,220,768) in view of Babu, and AAPA.

28. For claim 20, Barroux discloses a method for managing network interface information, comprising the steps of:

(a) inputting a hostname to each piece of network equipment (col. 19 lines 52-67, hostnames are stored in a database to be retrieved, fig. 2, asset database, col. 4 lines 42-45, col. 9 lines 12-20, fig. 7A-7D);

(b) inputting interface information including a code of corresponding site to one or more interfaces of each piece of the network equipment (col. 19 lines 52-67, interface information are stored in a database, fig. 2, asset database, col. 4 lines 42-45, col. 9 lines 12-20);

(c) generating an automatic management list to register the list to a network management system (fig. 2, asset database, col. 4 lines 42-45, col. 9 lines 12-20);

Barroux does not explicitly disclose:

said interface information being set according to a set of user-selectable, pre-defined rules;

(d) receiving current network equipment information at a predetermined period or in real-time, comparing the received information with the one registered to the network

management system using one or more hostname and code information, and performing at least one of a group of change of the interface information, addition of a new interface and deletion; and

(e) displaying a new interface management picture.

However, in the same field of endeavor, Babu discloses:

said interface information being set according to a set of pre-defined rules (table 1, rules of certain codes are used for certain devices)

(d) receiving current network equipment information at a predetermined period or in real-time (fig. 4A, SNMP query for device data is done in real time), comparing the received information with the one registered to the network management system using one or more hostname and code information, and performing at least one of a group of change of the interface information, addition of a new interface and deletion (col. 19 lines 60-67, fig. 4A, step 416, new device data is compared with stored device data; and in step 420, the stored device data is updated after device class has been mapped to an appropriate MIB set of DDD table in step 414); and

(e) displaying a new interface management picture (fig. 1, network information report 124 displays network information to the client).

Babu-Barroux does not explicitly disclose user selectable rules;

However, AAPA discloses user selectable rules (fig. 4, identifiers are user-defined names such as New Jersey)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Barroux, Babu, and AAPA in order to implement a

network information collecting system that can detect changes in the information being collected and report changes in a flexible manner (Babu, col. 2, lines 51-59).

29. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barroux-Babu-AAPA, in view of Simionescu et al. (US 2003/0084337, hereafter Simionescu).

30. For claim 21, Barroux-Babu-AAPA discloses the invention substantially as described in claim 20. Barroux-Babu-AAPA further discloses reading management information base values of a corresponding piece of network equipment transmitted from each piece of the network equipment at a predetermined time or in real-time, if interface information is changed (Babu, col. 15 lines 20-26 and 35-45). Barroux-Babu does not disclose using SYSlog as a means to transfer.

However, Simionescu discloses transmitting SYSlog entries of an abnormal device from the device to a network operation center for diagnosis in real-time ([0069] lines 5-15).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Barroux-Babu-AAPA and Simionescu in order to substitute SNMP traps with SYSlog (Simionescu, [0069] line 7), and use a SYSlog message containing MIB changes information to alert Barroux-Babu's network management system and update the NMS with MIB changes.

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

- A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HH/

HH

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SUPERVISORY PATENT EXAMINER
9/17/7